WHAT IS TO BE CLAIMED:

1.    A color image processing device comprising:

a color space converter for converting image signals to luminance signals corresponding to luminance and first and second chromaticity signals corresponding to chromaticity;

5    a luminance signal correcting unit for correcting the luminance signal of a target pixel based on an average luminance signal obtained from luminance signals of the target pixel and predetermined pixels surrounding the target pixel, and a saturation signal corresponding to saturation of 10 the target pixel;

a chromaticity signal correcting unit for correcting the first and second chromaticity signals of the target pixel based on first and second average chromaticity signals obtained from the chromaticity signals of the target pixel 15 and the predetermined pixels surrounding the target pixel, the saturation signal of the target pixel, an average saturation signal of the target pixel and the predetermined pixels surrounding the target pixel, and a hue difference signal representing color similarity which is obtained from 20 the first and second chromaticity signals and the first and second average chromaticity signals; and

a color space inverter for inverting the corrected luminance signal, the corrected first chromaticity signal and the corrected second chromaticity signal to image signals.

2.    A color image processing device according to claim 1, wherein the luminance signal correcting unit comprises a luminance correcting factor calculator for

determining a luminance correcting level for correcting the
luminance signal of the target pixel based on the average
luminance signal and the saturation signal of the target
pixel.

3.    A color image processing device according to
claim 2, wherein the luminance signal correcting unit
comprises a luminance corrector for correcting the luminance
signal of the target pixel based on the luminance correcting
level.

4.    A color image processing device according to
claim 1, further comprising:

a saturation calculator for generating a saturation
signal of the target pixel based on the first and second
chromaticity signals;

an average saturation calculator for generating the
average saturation signal based on the first and second
average chromaticity signals; and

a hue difference calculator for generating the hue
difference signal based on the first and second chromaticity
signals as well as the first and second average chromaticity
signals.

5.    A color image processing device according to
claim 4, wherein the chromaticity signal correcting unit
comprises a color correcting factor calculator for
determining the chromaticity correcting level for correcting
the first and second chromaticity signals of the target pixel
based on the saturation signal of the target pixel, the
average saturation signal and the hue difference signal.

6. A color image processing device according to claim 5, wherein the chromaticity signal correcting unit comprises a chromaticity corrector for correcting the first and second chromaticity signals based on the chromaticity correcting level.

7. A color image processing device comprising:

a color space converter for converting image signals to lightness signals corresponding to lightness, saturation signals corresponding to saturation and hue signals corresponding to hue;

a lightness signal correcting unit for correcting the lightness signal of a target pixel based on an average lightness signal obtained from the lightness signals of the target pixel and predetermined pixels surrounding the target pixel, and the saturation signal;

a saturation signal correcting unit for correcting the saturation signal of the target pixel based on an average saturation signal obtained from the saturation signals of the target pixel and the predetermined pixels surrounding the target pixel, and an average hue signal obtained from the hue signals of the target pixel and the predetermined pixels surrounding the target pixel; and

a color space inverter for inverting the corrected lightness signal, the corrected saturation signal and the hue signal to image signals.

8. A color image processing device according to claim 7, wherein the lightness signal correcting unit comprises a lightness correcting factor calculator for

determining a lightness correcting level for correcting the lightness signal of the target pixel based on the average lightness signal and the saturation signal.

9.   A color image processing device according to claim 8, wherein the lightness signal correcting unit comprises a lightness corrector for correcting the lightness signal of the target pixel based on the lightness correcting level.

10.   A color image processing device according to claims 7, wherein the saturation signal correcting unit comprises a saturation correcting factor calculator for determining a saturation correcting level for correcting the saturation signal of the target pixel based on the average saturation signal and the average hue signal.

11.   A color image processing device according to claim 10, wherein the saturation signal correcting unit comprises a saturation corrector for correcting the saturation signal of the target pixel based on the saturation correcting level.

12.   A color image processing method comprising the steps of:

(a) converting image signals to luminance signals corresponding to luminance, and first and second chromaticity signals corresponding to chromaticity;

(b) correcting the luminance signal of a target pixel based on an average luminance signal obtained from the luminance signals of the target pixel and predetermined

pixels surrounding the target pixel, and a saturation signal

10 corresponding to saturation of the target pixel;

(c) correcting the first and second chromaticity signals of the target pixel based on first and second average chromaticity signals obtained from the chromaticity signals of the target pixel and the predetermined pixels surrounding

15 the target pixel, the saturation signal of the target pixel, the average saturation signal, and a hue difference signal representing color similarity obtained from the first and second chromaticity signals and the first and second average chromaticity signals; and

20 (d) inverting the corrected luminance signal, the corrected first chromaticity signal and the corrected second chromaticity signal to image signals.

13. A color image processing method according to claim 12, wherein the step of (b) for correcting the luminance signal further comprises the steps of:

(e) determining the luminance correcting level for

5 correcting the luminance signal of the target pixel based on the average luminance signal and the saturation signal of the target pixel; and

(f) correcting the luminance signal based on the luminance correcting level.

14. A color image processing method according to claim 12, wherein the step of (c) for correcting the chromaticity signals further comprises the steps of:

(g) generating the saturation signal of the target

5 pixel based on the first and second chromaticity signals;

(h) generating the average saturation signal based on the first and second average chromaticity signals; and

(i) generating the hue difference signal based on the first and second chromaticity signals as well as first and second average chromaticity signals.

15.   A color image processing method according to claim 14, wherein the step of (c) for correcting the chromaticity signals further comprises the steps of:

(j) determining a chromaticity correcting level for correcting the first and second chromaticity signals of the target pixel based on the saturation signal of the target pixel, the average saturation signal and the hue difference signal; and

(k) correcting the first and second chromaticity signals of the target pixel based on the chromaticity correcting level.

16.   A color image processing method comprising the steps of:

(a) converting image signals to lightness signals corresponding to lightness, saturation signals corresponding to saturation and hue signals corresponding to hue;

(b) correcting the lightness signal of a target pixel based on an average lightness signal obtained from the lightness signals of the target pixel and pixels surrounding the target pixel, and the saturation signal;

(c) correcting the saturation signal of the target pixel based on an average saturation signal obtained from the saturation signals of the target pixel and the predetermined

pixels surrounding the target pixel, and an average hue signal obtained from the hue signals of the target pixel and

15 the predetermined pixels surrounding the target pixel; and

(d) inverting the corrected lightness signal, the corrected saturation signal and the hue signal to image signals.

17. A color image processing method according to claim 16, wherein the step of (b) for correcting the lightness signal further comprises the steps of:

(e) determining a lightness correcting level for

5 correcting the lightness signal of the target pixel based on the average lightness signal and the saturation signal; and

(f) correcting the lightness signal of the target pixel based on the lightness correcting level.

18. A color image processing method according to claim 16, wherein the step of (c) for correcting the saturation signal further comprises the steps of:

(g) determining a saturation correcting level for

5 correcting the saturation signal of the target pixel based on the average saturation signal and the average hue signal; and

(h) correcting the saturation signal of the target pixel based on the saturation correcting level.

19. A color image processing method according to claim 17, wherein the step of (c) for correcting the saturation signal further comprises the steps of:

(g) determining a saturation correcting level for

5 correcting the saturation signal of the target pixel based on the average saturation signal and the average hue signal; and

15          (h) correcting the saturation signal of the target

pixel based on the saturation correcting level.